

TWO NEW SPECIES AND A NEW NAME IN *COMMELINA* L. (COMMELINACEAE) IN AUSTRALIA

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Summary

C. reticulata and *C. tricarinata* are described as new and illustrated. *C. reticulata* is from the western Kimberley region of Western Australia. *C. tricarinata* is from the Barkly Tableland area of the Northern Territory and western Queensland. *C. ciliata* is a new name for *C. acuminata* Ewart & McLennan non Poiret. *C. ciliata* is also illustrated.

In the course of studies on *Commelina* L. it became apparent that two undescribed species belonging to this genus occur in Australia. One species occurs in the Camden Sound - Calder River area of the Kimberley region in Western Australia. The other is widespread in Western Queensland and the Barkly Tableland area of the Northern Territory. Study also revealed that *C. acuminata* Ewart & McLennan is illegitimate, being a later homonym of *C. acuminata* Poiret.

This paper is a precursor of a revision of the genus *Commelina* L. in Australia and was written to validate the names given here and hence allow use of the names. A complete discussion of the relationships of all the Australian species, including a discussion of subgenera, will be included in the forthcoming revision.

***Commelina reticulata* Stanley, sp. nov., *C. agrostophyllae* F. Muell. primo aspectu maxime simili, sed testa seminum reticulata differt. Typus:** Western Australia: Camden Sound, 18 May 1921, *C.A. Gardner* 1344 (holo: PERTH).

Caules repentes. Folia linearia vel lineari-lanceolata, acuta, 3-7.5 cm longa et 1-2 mm lata. Spatha singularia, 1-3 cm longa et 2.5-3.5 mm lata, marginibus plerumque fimbriatis; cymae 2, cyma superior flore 1 praedito, cyma inferior floribus 2 vel 3 praeditis. Flores caerulei. Ovarium 2-loculare. Capsula ovoidea, c. 6 mm longa. Semina ovoidea, c. 2.5 mm longa, testa reticulata.

Perennial (?) with prostrate stems. Leaves linear or linear-lanceolate, 3-7.5 cm long, 1-2 mm wide, apex acute. Spathes borne singly in leaf axils, 1-3 cm long, 2.5-3.5 mm wide, with long apical acumen and free margins, the margins of the broadest portion of the spathe with a sparse fringe of tubercle-based multicellular hairs up to 3 mm long, sometimes only 1 or 2 hairs present or some spathes with no marginal hairs, inner surfaces of spathes ± glabrous; peduncles 1.5-6.5 cm long. Cymes 2 per spathe, upper cyme 1-flowered, the flower male or sometimes bisexual, lower cyme 2- or 3-flowered. Flowers blue, c. 2 cm across. Calyx segments with sparse minute hooked hairs outside. Stamens 3, staminodes 3. Ovary apparently 2-locular, with 2 ovules in each locule. Capsules developing outside spathe, ovoid, c. 6 mm long. Seeds ± ovoid, c. 2.5 mm long; seed coat with coarse raised reticulate venation. **Fig. 1A-C.**

Specimens examined: Western Australia. Camden Sound, May 1921, *Gardner* 1344 (PERTH); Port George IV, Camden Sound, May 1921, *Gardner* 844 (PERTH); 2 km SW of Base Camp near Munja on Calder River, May 1983, *Edinger* 5 (PERTH); 1 km north of Calder River, May 1983, *Edinger* 50 (PERTH).

Distribution and habitat: It is known only from the vicinity of Camden Sound and Calder River in the western Kimberley region of Western Australia. Only two of the specimens seen had habitat information on associated labels. Both were collected on damp to wet soils on an alluvial floodplain.

Affinities: Vegetatively the species closely resembles *C. agrostophylla* F. Muell. but is easily distinguished from that species by its reticulate veined seed coat, whereas *C. agrostophylla* has a smooth seed coat. *C. tricarinata* Stanley also has reticulately veined seed coats but on vegetative characters does not appear to be closely related to *C. reticulata*.

Conservation status: The species is poorly known and has a restricted distribution. It has a Conservation status of 2K by the criteria of Briggs and Leigh (1988).

Etymology: The specific epithet refers to the raised reticulate venation on the seed coat.

Note: The two specimens collected by C.A. Gardner from Camden Sound on 18 May 1921 may be part of the same collection. The specimen I have designated holotype has a handwritten label from the "Herbarium of the Forests Department" and the collection number 1344. The other specimen is part of the Herbarium Gardnerianum and has a typewritten label with the collection number 844 and the additional information "Port George IV". Because of the similarity of the numbers it may be that a transcription error occurred when the labels were being prepared. If that is the case then the sheet Gardner 844 would be an isotype.

Commelina tricarinata Stanley, *sp. nov.* affinis *C. reticulatae* Stanley sed spatha 2.5–4.5 cm longa et 0.9–1.5 cm lata et tricarinata differt. **Typus:** Northern Territory: 3 miles [4.8 km] W Crows Nest bore, Burnett Downs, 23 March 1956, *G. Chippendale* 1952 (holo: NT; iso: AD,BRI,CANB,MEL,NSW).

Planta perennis. Caules repentes vel ascendentes. Folia lanceolata vel interdum ovata, acuta vel acuminata, 3–12 cm longa et 0.8–1.6 cm lata. Spatha singularis, 2.5–4.5 cm longa et 0.9–1.5 cm lata, tricarinata; carinae conspicuae; cymae 2, cyma superior floribus 1 vel 2 praeditis, cyma inferior floribus 3 praeditis. Flores caerulei. Ovarium 3-loculare. Capsula ovoidea-globosa, 7–9 mm longa, loculus dorsalis indehiscens, loculi ventrali dehiscenti. Semina globosa, c. 3 mm diametro, testa venationibus reticulatibus.

Plants with perennial rootstock and short lived above-ground parts. Stems prostrate or ascending, usually less than 50 cm tall, often less than 20 cm tall. Leaves lanceolate or occasionally ovate, 3–12 cm long, 0.8–1.6 cm wide, glabrous; apex acute to ± acuminate. Spathes borne singly in the leaf axils, 2.5–4.5 cm long, 0.9–1.5 cm wide; tip acuminate, keeled along fold; sides with a conspicuous keel c. 1/3 of distance from the base to the top; margins free at base and with minute cilia; peduncles up to c. 5 cm long. Cymes 2 per spathe; upper cyme 1- or 2-flowered, the flowers apparently male; lower cyme 3-flowered, the flowers bisexual. Flowers blue, c. 2 cm across. Calyx segments with sparse minute hooked hairs along central part or glabrous. Stamens 3; staminodes 3. Ovary with 2 ovules in each ventral locule, dorsal locule with 1 ovule. Capsules 7–9 mm long; ventral locules dehiscent, dorsal locule usually developed, indehiscent. Seed ± globular, c. 3 mm diameter; seed coat with conspicuous raised reticulate venation. **Fig. 1D & E.**

Specimens examined: Northern Territory. 10 miles [16 km] NW of Rankin River, Jun 1947, *Perry* s.n. (CANB); Brunchilly Station, Attack Creek, Mar 1966, *McEvey* 45 (MEL,NT); 3 km north of No. 8 Bore, Brunchilly Station, Jun 1984, *Low* 129 (NT); 3 miles [4.8 km] SE Rockhampton Downs H.S., Mar 1959, *Chippendale* 5399 (NSW,NT); 3 miles [4.8 km] W Crows Nest bore, Burnett Downs, Mar 1952, *Chippendale* 1952 (AD,BRI,CANB,MEL,NSW,NT); Queensland. BURKE DISTRICT: 60 miles [96 km] north of Julia Creek on Julia Creek – Normanton road, Mar 1977, *Schmid* AS 121 (BRI); 60 miles [96 km] NW of Maxwellton on "Sutherland", Mar 1964, *Entwistle* 16 (BRI); Hughenden, May 1933, *McCarthy* 45/33 (BRI). GREGORY NORTH DISTRICT: Elderslie, Oct 1935, *Blake* 10013 (BRI); Georgina R., 3 miles [4.8 km] E Glenormiston H.S., Jan 1970, *Latz* 538 (BRI,NT); Georgina River crossing, Jan 1970, *Robinson* 1 (NT); Eyre Creek, 35 miles [56 km] S of Bedourie, Jul 1936, *Blake* 12293 (BRI). GREGORY SOUTH DISTRICT: Nocatunga, *Morris* 1082 (BRI). WARREGO DISTRICT: 46 km from Cunnamulla along road to Barrington, Mar 1976, *Purdie* 282 & *Boyland* (BRI).

Distribution and habitat: The species is endemic in the Barkly Tableland area of the Northern Territory and in arid areas of western Queensland. The species is usually found in grey or black cracking clay soils in or around areas subject to inundation after rains.

Affinities: The species does not appear to be particularly closely related to any of the other species of *Commelina* in Australia. On seed characters its closest Australian relative is *C. reticulata* Stanley but is easily distinguished from it on vegetative characters, notably its 3-keeled spathe and broader leaves.

Conservation status: This species is widely distributed and although it is not known to occur in any reserves it does not appear to be threatened.

Etymology: The specific epithet is derived from *tri* (three) and *carina* (keel).

Notes: Field observations in western Queensland suggest that the rootstock lies dormant in the soil until after rain, when the plant quickly produces shoots, flowers and fruits. The plants are apparently able to grow to flower and fruit after rainfall from a single

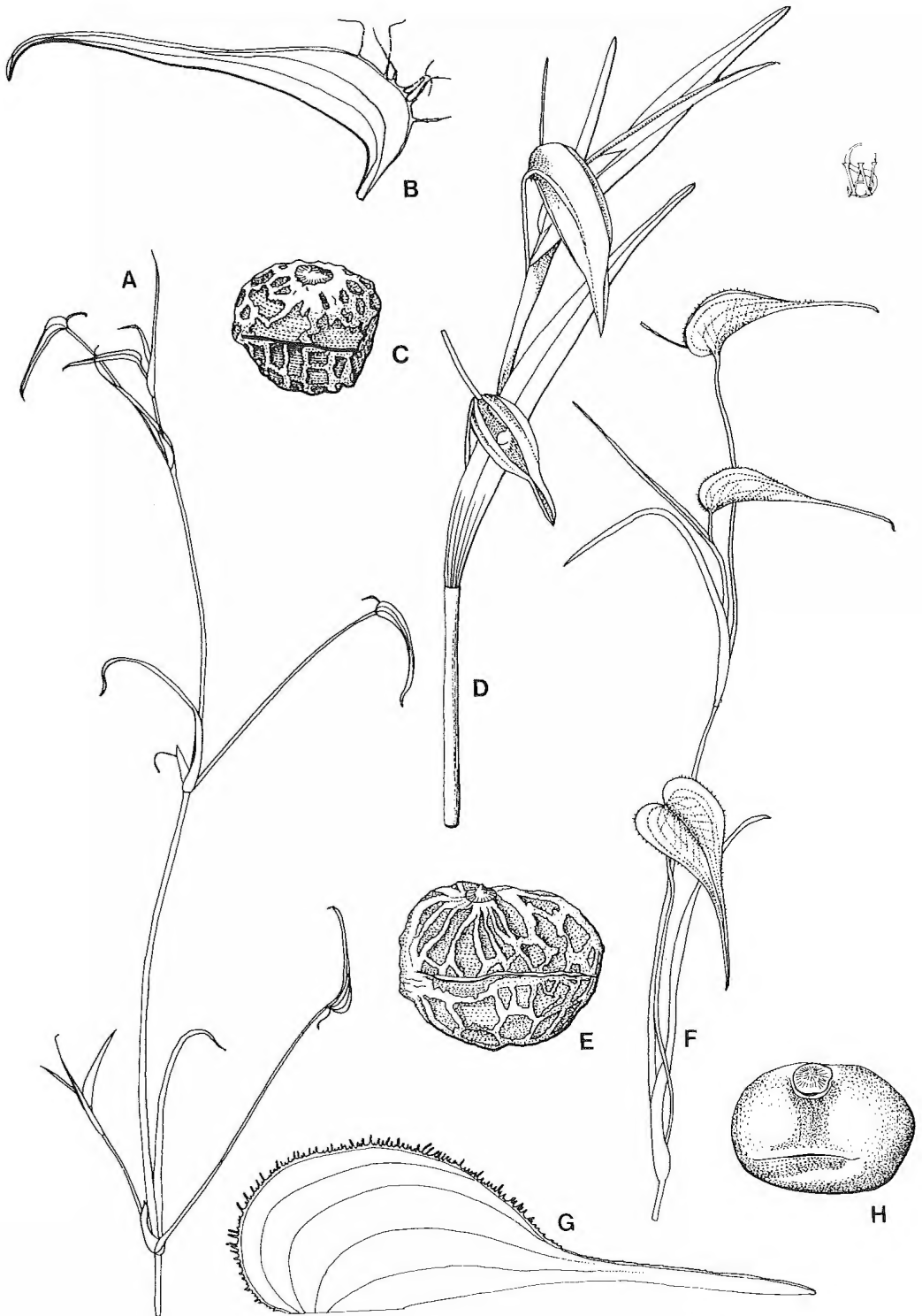


Fig. 1. *Commelina reticulata*: A. portion of stem with spathes $\times 0.67$. B. spathe $\times 3$. C. seed $\times 8$. *Commelina tricarinata*: D. portion of stem with spathes $\times 0.67$. E. seed $\times 8$. *Commelina ciliata*: F. portion of stem with spathes $\times 0.67$. G. spathe $\times 3$. H. seed $\times 8$.

storm and before the soil dries out. Also, the species is probably more common than herbarium records indicate.

***Commelina ciliata* Stanley, nom. nov.**

Commelina acuminata Ewart & McLennan in Ewart & Davis, Fl. N. Territory, 68–69 (1917), *nom. illeg.*; non *Commelina acuminata* Poiret, Encycl. Suppl. ii: 324 (1811). **Type:** near Red Lily Lagoon, 6 April 1912, *G.F. Hill* 833 (lecto (designated here): MEL; isolecto: NSW). **Fig. 1F–H.**

Note: Ewart and McLennan did not cite a holotype with the original description. The sheet here chosen as lectotype has the collector number 833 which is the number cited with the original description. However the sheet here designated isolectotype has the collector number 1833 but all other label details are identical with those on the lectotype sheet. The lectotype label has the number enclosed in brackets but the left hand bracket could be mistaken for the figure one. It appears that a transcription error occurred when the label for the isolectotype was being prepared.

Reference

BRIGGS, J.D. & LEIGH, J.H. (1988). Rare or Threatened Australian Plants. 1988 Revised Edition. Australian National Parks and Wildlife Service Special Publication No. 14. Canberra: Australian National Parks and Wildlife Service.

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